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# American Foundryman

A PUBLICATION PRESENTING ASSOCIATION AND CHAPTER ACTIVITIES

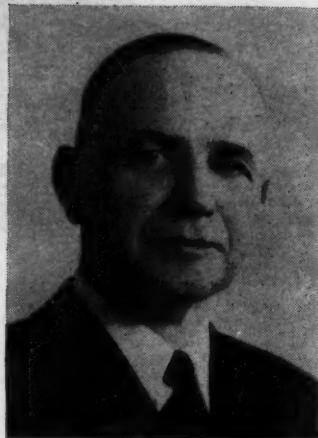


Laboratory study of the structure of cast iron

(Courtesy Frank Foundries Corp.)

President Reviews Progress and Objectives of A.F.A., See  
Page 2. Temperatures Attained Within the Test Sand  
Specimen, See Page 5. Apprentice Standards Discussed,  
Page 7. Canadian Foundrymen Assist Students, Page 9.

July  
1944



## Continued Development Rather Than Spectacular Innovations Will Be Goal During 1944-45

YEAR after year the American Foundrymen's Association becomes more and more useful to the foundry industry and, therefore, to the public generally. Each succeeding year closes with a record of greater accomplishment through the work of national committees, chapter activities, and greater contributions by technical authors.

The services offered by the national office grow broader and memberships increase to new highs, and the record of achievement, be it one of completed projects or of progress toward some goal not quickly attained, is testimony of faithful effort of those who serve their association.

To the national officers and board members, whose terms expire in the month of July, I now say "Thanks for your leadership and inspiration—you will be called upon again." To those who continue and to the indefatigable staff, "Thank you all—you never were needed more than now."

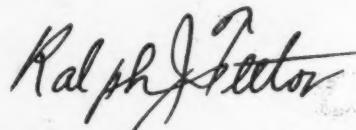
Every incoming president of A.F.A. envisions certain objectives which he hopes may reach at least partial fruition during his term of office. I have in mind for the coming year no spectacular innovations to suggest but, rather, the furthering of the constructive work of past administrations, and cooperation with the permanent staff in these efforts.

RALPH J. TEETOR, president of the Cadillac Malleable Iron Co., Cadillac, Mich., is the newly elected president of the American Foundrymen's Association, Inc. Mr. Teetor has devoted his entire business career to the foundry industry. He has served as a director of the Western Michigan Chapter, and has actively participated in the affairs of the Malleable Iron Division Advisory and other A.F.A. committees.

I am confident that during the year much progress will be made in promoting the effectiveness of the facilities now offered by the national office both to A.F.A. members and to the public generally, especially looking toward increasing the value of foundry services to the armed forces.

It is my belief that this will be a year of increasing cooperation among the several branches of the foundry industry and those collateral industries which are interdependent with foundries for their growth and well being. This will be a year during which the need for committee activities will be greater than ever before, for we have with us now not only war derived problems, but the responsibility of preparing for post-war employment.

I further believe that the coming year will find A.F.A. nationally—through its chapters, national committees and general membership—an increasingly potent force for the war effort and, in time, for the general good of the industry in the peace to follow.

A handwritten signature in black ink, appearing to read "Ralph J. Teetor". The signature is fluid and cursive, with a prominent 'T' at the beginning.

RALPH J. TEETOR, President-Elect,  
American Foundrymen's Association.

# American Foundryman



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American Chain & Cable Co., Inc.,  
Reading, Pa.

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## CONTENTS

JULY, 1944  
VOL. 6—No. 7

	Page
Continued Development Rather Than Spectacular Innovation Will Be Goal During 1944-45, by Ralph J. Teeter.....	Inside Front Cover
Progress and Objectives of Association Reviewed in President's Annual Address, by L. C. Wilson.....	2
Tests Temperature Attained Within Specimens of Molding and Core Sands, by D. C. Williams.....	5
Present and Post-War Apprenticeship Standards, by Wm. F. Patterson.....	7
Canadian Foundrymen Cooperate with School in Education Program .....	9
New Association Members.....	10
Past A.F.A. President Merits Government Award.....	11
A.F.A. Chapter Activities.....	12
Calling All Speakers for Chapter Meetings.....	17

*The American Foundrymen's Association is not responsible for statements  
or opinions advanced by authors of papers printed in its publications.*

# Progress and Objectives of Association Reviewed in President's Annual Address

By L. C. Wilson, Reading Steel Casting Div.,  
American Chain & Cable Co., Reading, Pa., President, American Foundrymen's Association

THE year just past in your service, as president, has been a very interesting one. Many problems have arisen, due not only to the times, but also to the growth of your Association. All industry, including our own, has had many problems apart from those experienced in peace times, and your Association has felt the full impact of these changing situations.

## Staff Appointments

A year ago, C. E. Westover, then executive vice-president, was called back into industry. Your Board of Directors met in St. Louis, during the 1943 annual meeting, and appointed R. E. Kennedy to assume the duties of the executive vice-president, in addition to those of secretary, until a definite decision upon replacement of the executive vice-president could be made.

Because of his familiarity with the structure of the Association, Bob Kennedy fitted into this position so well that the Board of Directors, at its July, 1943, meeting, voted to combine the duties of the executive vice-president and the secretary, as permitted in the By-Laws, and elected R. E. Kennedy to fill both offices, with the title of secretary. At the same time, the following appointments were made:

C. E. Hoyt, Treasurer and Exhibits Consultant

N. F. Hindle, Assistant Secretary on Technical Activities and Publications

W. W. Maloney, Assistant Secretary on Exhibits and Advertising

Jennie Reininga, Assistant Treasurer

In January of this year, Secretary Kennedy suddenly became ill, throwing an added burden on the National Office Staff. The Staff has risen to the emergency admirably, and I cannot express in words the admiration that I have for them and for their loyalty and untiring efforts in carrying on the operation of the Association during this period. Bob Kennedy's recovery to date has been



L. C. Wilson  
Retiring President, A.F.A.

remarkable, and we are glad to have him with us again.

## By-Laws Revision

In 1943, when D. P. Forbes was president of your Association, he appointed a committee to study and, if necessary, revise the By-Laws of the Association. The committee was continued under the present administration.

Its members gave a great deal of their time and energy to the revision problem, and the members of the Association are indebted to them for their splendid work. The findings of the committee indicated that few changes were necessary, and that the old By-Laws were fundamentally good. With few exceptions, most of the changes were of an editorial character.

The committee submitted its report to the Board of Directors, who decided that the proposed revised By-Laws be submitted to the membership for letter ballot. The By-Laws were submitted on February 15, 1944, and your president appointed a committee of judges to canvass the ballots.

On March 15, 1944, the balloting was closed in accordance with the By-Laws, and on March 18 the committee met, canvassed the ballots, and reported to your president that 1210 members had voted, and that

*The accompanying address, presented by the retiring A.F.A. president at the Annual Business and Awards Meeting held during the 3d War Production Foundry Congress at Buffalo, sets forth the accomplishments and aims of the American Foundrymen's Association which is serving an industry at war.*

1191 ballots favored adoption of the revised By-Laws. In view of this count, the new By-Laws are declared approved by the American Foundrymen's Association's membership, and in accordance with the resolution of the Board of Directors, will become effective on July 1, 1944.

## Committee Activity

The work of your committees, in spite of the demands made on committee workers during the past year, has continued unabated. In fact, several new committee projects have been instituted. With the exception of a relatively few committees, they have carried on as they normally do in peace time, and, in some instances, activity has actually increased.

Time does not permit outlining the work done by the nearly 100 working committees composed of approximately 500 workers, who have given so generously of their time and energy in serving on these committees. The American Foundrymen's Association acknowledges the debt of gratitude to them, and to their companies, for their work in advancing the knowledge and practices of the foundry industry.

Your Board of Directors is extremely pleased with the committee activity during the past year, because it has felt that it was of the greatest possible importance to keep all committees functioning as well as possible under present conditions.

## Gift Acknowledgment

During the past few years, your Association has been sponsoring a research program on the elevated temperature properties of steel foundry sands at Cornell University,

Ithaca, N. Y., in cooperation with the Naval Research Laboratory, Washington, D. C. More recently, the scope of the committee has been enlarged to include iron and non-ferrous sands.

The program is of a basic research character. Progress, because of the large number of variables to be considered, has not been too rapid. To assist in speeding up the work at Cornell University, Harry W. Dietert has presented a second dilatometer to the American Foundrymen's Association, to be used at Cornell University in the work being carried on there in the high temperature testing of foundry sand. We wish to at this time acknowledge the generosity of Mr. Dietert, and to extend to him the thanks of the Association for his contribution.

#### *Board of Directors Committees*

The foundry industry has grown to be a very complex industry, and it was inevitable that the affairs of the American Foundrymen's Association should have followed a similar trend. Your Board of Directors, whose members represent steel, malleable, gray iron, brass and bronze, aluminum and magnesium foundries, patternmaking, supplies and equipment interests, consists of 17 men elected to guide the affairs of the A.F.A.

With the growth of the membership and increased number of chapters and activities, responsibilities of the directors have increased progressively, and the honor of representing the Association on the Board of Directors carries with it a great deal of work.

Yours is a Board of working directors. To assist and advise the staff, certain committees of the Board have been formed. These committees are Finance, Membership, Exhibits, American Foundryman Magazine Policy, Chapter Contacts and Technical Activities Correlation.

#### *Chapters*

The chapters of your Association now number twenty-seven. During the past year, three new chapters have been added to the list, namely, the Texas Chapter (Houston), the Canton District Chapter (Ohio) and the Rochester Chapter (N. Y.). We are glad to welcome these new chapters and know that they will take their places along with the other chapters of your Association in their

work of bringing foundrymen together and in disseminating information on the products and processes of the foundry industry.

This year, membership of your Association has reached a new high, and the activity of the chapters has played a large part in this membership increase.

In the foundry industry, men are seeking knowledge of their business. To be sure, the friendships made through these gatherings are valuable, but they are incidental to the technical and operating subjects pertaining to our business. Chapters have a responsibility of keeping their programs instructive, interesting and up-to-date. The evidence of increased membership during the past year indicates that they have done a remarkably good job.

Our chapters now spread over the entire country. Your officers and staff would like to be able to visit each chapter and to inform them of the policies of A.F.A.

With the number of chapters now in existence, it is obviously impossible for the officers and staff to visit all of the chapters, and it is for this reason the directors have been requested to visit the chapters in their vicinities and keep them informed of the policies of our Association. The officers and staff will visit as many chapters as conditions permit. Chapter visitations will be planned by the Board of Directors Committee on Chapter Contacts.

#### *Membership*

During the past year, the Membership Committee of your Association has been under the chairmanship of Vice-President R. J. Teator. Its membership has consisted of the chairmen of all chapter membership committees. That this committee has done very constructive work is evidenced by the fact that our membership now totals 6319 members. This is an increase of approximately six times the total membership during World War I.

#### *Publications*

Publications of this Association are the result of the work of committees assisted by the staff. During the past year, this activity has been seriously handicapped by manpower shortage, paper shortage, and other difficulties incident to these conditions.

Despite these handicaps, the staff

has done a remarkable job, having produced, in addition to the regular publications of the Association, which included the monthly *AMERICAN FOUNDRYMAN*, quarterly "Transactions," bound volume "Transactions," and preprints, the following books: "Alloy Cast Irons Handbook," "Recommended Practices for the Sand Casting of Non-Ferrous Alloys," "Malleable Melting Symposium," "Magnesium Alloys Foundry Practice" and "Recommendations to Buyers of Castings."

The third edition of the "Cast Metals Handbook" has been printed, and difficulty in securing binding facilities is the only item which prevented circulation of the book at this Congress.

Publications of the Association have been well done, and this phase of our activities has increased to the point where it is necessary that a larger staff be employed. The many requests from members and non-members interested in information so far as is contained in Association publications, has become an important part of the activity of the National Office Staff.

#### *Foundation*

Early in 1943, the Board of Directors, by resolution, established a so-called Foundation Project, for the purpose of enlarging the field of activity of your Association. At the Second War Production Foundry Congress, in St. Louis in 1943, you were advised that a promotional fund of approximately \$50,000 had been contributed.

A great deal of time has been spent by your Executive Committee in examination of this project. The conclusion finally was reached that it would be necessary to simplify the original program, and a proposal and recommendation was presented to the Board of Directors on January 19, 1944, and passed unanimously by the Board.

Therefore, it is possible for me to tell you of the plan as approved. Your officers and directors believe that the new plan will be the means of carrying out more fully the fundamental objectives of the American Foundrymen's Association, as stated in the By-Laws.

Dr. Guilliam H. Clamer, in his address at the Annual Meeting in Milwaukee, in 1924, very clearly pictured the trend of the course

charted by A.F.A., showing that the objects set down by the founders were in general being carried out:

- "(1) We conduct research.
- "(2) We regularly hold sessions for the presentation and discussion of technical papers, and through the medium of our Bulletins we disseminate information of value to the industry."

The proposal of the Executive Committee conforms to the objectives of the American Foundrymen's Association, and is simply an amplification of our work, so ably presented by Dr. Clamer.

The activities to be carried out under the plan may be divided into four major categories, composed of the special activities of the Association, namely, (1) revising and publishing special books and publications, (2) promoting and coordinating research activities, (3) broadening of library and reference facilities, and (4) development of lecture material for presentation at chapter meetings and at meetings of engineering societies and other groups.

The plan provides for a director of these activities to function under the guidance of the A.F.A. Secretary, and an advisory committee consisting of members of the Board of Directors, together with representatives from management and technical and operating groups of the various branches of the industry.

To finance the program, \$25,000, now used for special activities, will be

appropriated from the general funds of the Association, and donors to the Foundation Promotion Fund will be approached with the request that they make their contributions available for this work.

This new plan is ready to function. Your Association, for the past several years, has published books on a variety of subjects, compiled either by committees of your Association or by individual members. Such books include the "Cast Metals Handbook," "Sand Testing and Grading Methods," "Alloy Cast Irons," "Modern Core Practices and Theories," "The Microscope in Elementary Cast Iron Metallurgy," and "Non-Ferrous Recommended Practices." Several other projects are now in process.

The term "research" has been interpreted broadly, which has led to many differences of opinion among us. As you know, the A.F.A. is sponsoring basic research activity on foundry sands at Cornell University, Ithaca, N. Y., in cooperation with the Naval Research Laboratory, Washington, D. C., under the direction of one of our committees. This work is of long duration and of great importance to the industry. From it we are constantly learning, and not the least of our lessons is that the scope of such work by A.F.A. can be definitely limited.

The trade associations of the industry have formulated extensive programs for their branches of the castings industry. The study of

these programs shows one the directness of the approach. These activities of the trade associations do not interfere or encroach upon the field of work of A.F.A. Rather, they enhance our opportunities, as covered by the objectives of the American Foundrymen's Association.

Through the years, your Association has accumulated an enormous fund of information. Nowhere else in the country is there such a collection of facts pertaining to the foundry industry—this applies to technical and educational phases.

With the enlargement of our library and reference facilities, we are in a position to consolidate a program which will be of inestimable value, not only to the operations of foundries, but as an aid to associations which are developing research programs.

The development of lecture material for presentation before chapters of the Association as well as engineering and other societies is one of the blank spots in the foundry industry's efforts. Some work has been done, but there has been little sustained effort.

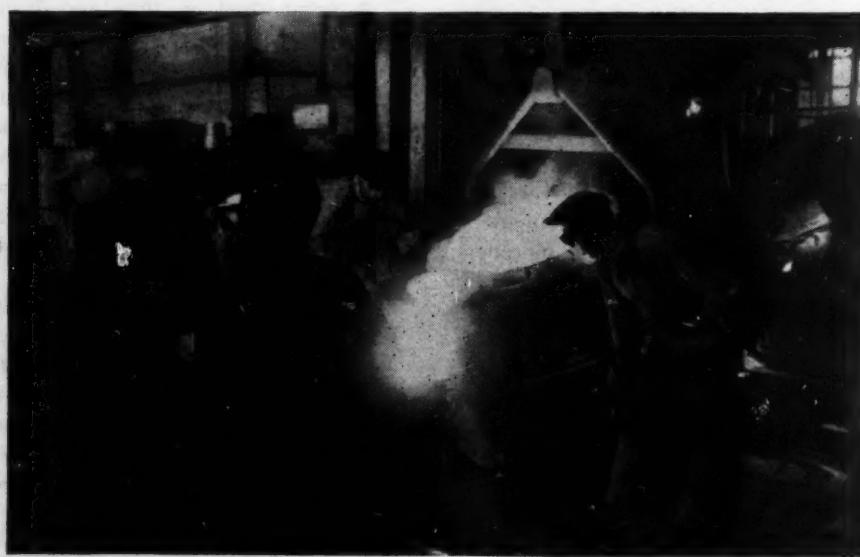
It is hoped, through the work under the new plan, that the educational activities of the various groups within the industry may be correlated to the advantage not only of the individual groups, but of the entire foundry industry.

#### Conclusion

In many ways, the past year has presented uncertainties but, notwithstanding all the difficulties, your Association has progressed. In looking into the future, we should have every confidence that the A.F.A. will continue to build its services to an even greater extent than has been possible in the past.

Under the most trying conditions, our members, directors and staff have given their enthusiastic support and earnest cooperation, and it is through their efforts that the Association has been able to show, as it has this week, its value to our industry.

My part in serving, measured by this most successful Congress, seems small to me by comparison, and not in keeping with the honor of the office I have tried to fill. The friendships I have made and the memory of the past year I shall always cherish—I thank you one and all for them.



This snapshot, submitted by George Davison, Supt., Beach Foundry, Ltd., Ottawa, shows that he appreciates the photographic possibilities of his men at work, pouring tank shoes for war production.

# Tests Temperature Attained Within Specimens of Molding and Core Sands

By D. C. Williams, Ithaca, N. Y.  
A.F.A. Research Fellow, Cornell University.

This article describes a method of measuring elevated temperatures developed within molded sand specimens, both with and without the metal pin inserted in the center.

MESSRS. H. F. Taylor, Naval Research Laboratory, Washington, D. C., and H. W. Dietert, Harry W. Dietert Co., Detroit, have conducted experiments at elevated temperatures on  $1\frac{1}{8}$  x 2-in. molded sand specimens into the center of which small metal pins have been inserted. Their work endeavors to lead to the answer of what happens at the metal-mold interface when a casting is poured. The writer has made an attempt to measure the temperatures developed within the specimen with and without a metal pin in place. The procedure used by the writer is *only one method* that lends itself to such investigation.

## Test Equipment

The equipment used by the author in conducting experiments of the nature outlined above included:

1. A dilatometer for testing the high temperature properties of sand.
2. An indicating potentiometer.
3. Chromel-alumel thermocouples.
4. Pins of 0.15 per cent carbon-steel,  $\frac{1}{4}$ -in. in diameter and  $1\frac{5}{8}$ -in. long.
5. A molded sand specimen  $1\frac{1}{8}$ -in. in diameter and 2-in. high, in the center of one end of which is a hole of such dimensions to accommodate the steel pin previously mentioned.
6. Refractory disks 1-in. thick and  $1\frac{1}{8}$ -in. in diameter (the author used a type disk known as "mulfrax" S).
7. A steel disk  $\frac{1}{4}$ -in. thick and  $1\frac{1}{8}$ -in. in diameter, to which is rigidly attached at its center, perpendicular to the disk, a steel pin  $\frac{1}{4}$ -in. in diameter and  $1\frac{5}{8}$ -in. long.

## Sand Mixture

In the series of tests conducted by the author, the sand mixture used was composed of 96 per cent New Jersey No. 60 washed and dried silica sand, 4 per cent western benton-

ite and 4 per cent moisture (Distilled water was used.)

## Procedure

The steel disk and pin (see No. 7 under equipment) was dropped into the  $1\frac{1}{8}$  x 2-in. specimen ramming tube and then 42 grams of the sand mixture was rammed around the pin. Three drops of the rammer weight were used. The specimens, tested in the dry condition, were oven dried for 2 hours at 212 to 225°F. and cooled in a desiccator until needed.

The lower "Mullfrax S" disk with parallel end surfaces (see No. 6 un-

der equipment) had a groove cut across one face deep enough to permit the thermocouple wire to fit into the depression. This made it possible for the specimen to set flat upon the disk.

The thermocouple was attached to each pin in the following manner (Fig. 1). On one end of the steel pin, two shallow cuts are made with a jeweler's saw. The two cuts are  $180^\circ$  apart. The thermocouple wires are pressed into the cuts and peened into place. This method of attaching the wires permits the pin to become the thermocouple bead. The thermocouple wires were long

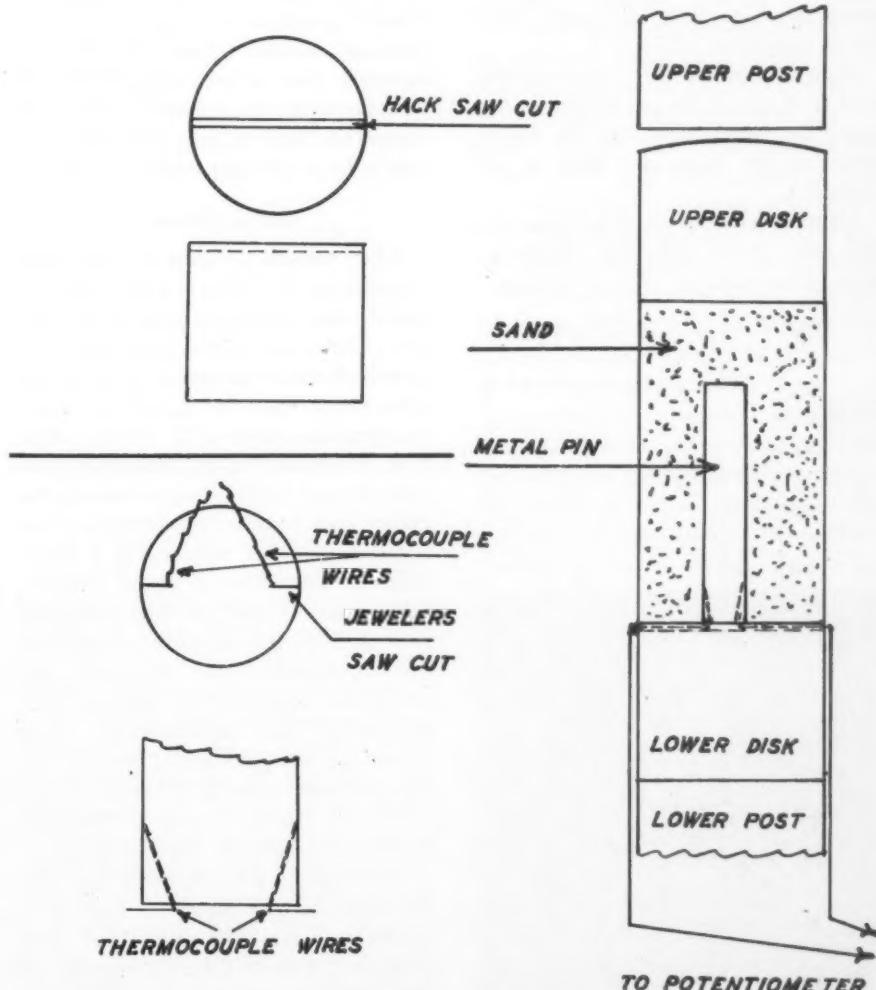


Fig. 1—Top Left—Mullfrax S Disk Showing Saw Cut for Insertion of Thermocouple Wires. Bottom Left—Enlargement of Steel Pins Showing How the Pins Were Cut for Attachment of Thermocouple Wires. Right—Assembly Showing Pins with Thermocouple Wires Attached and Inserted into  $1\frac{1}{8}$  x 2-in. Specimen Ready for Testing.

enough to extend to the compensating potentiometer.

The pin, with attached thermocouple wires, was inserted into the hole in the molded sand specimen. The wires were bent so that they would fit into the groove of the bottom disk, with the wires bent down along the disk 180° apart. The top disk, with one flat surface, was placed upon the specimen. This assembly was placed in the dilatometer and tested at the desired temperature control setting.

To obtain the temperatures without steel pins, the only change made was the substitution of a protecting shield for the pin and the two thermocouple wires were welded together.

### Results

Figure 2 shows results of temperatures indicated  $\frac{1}{8}$ -in. down from the top of the specimen, both green and dry conditions, as the exposure time is increased. Only one curve is shown in Fig. 1 because the curves for the green and dry specimens are practically identical after one minute of exposure.

Figure 3 shows the temperatures indicated when the steel pin is inserted into the green and dry specimens as the exposure time is increased.

All tests were checked because the first tests made indicated temperatures above that of control setting.

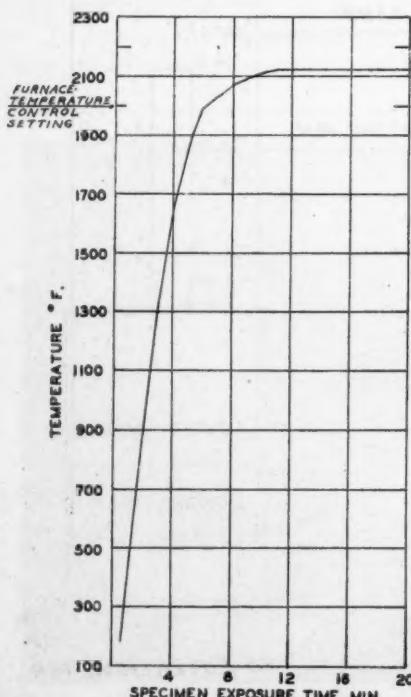


Fig. 2—Variation in Temperature with Exposure Time in Both Green and Dry Sand Specimens.

The temperatures indicated by the pin in the dry sand specimen showed the same maximum as the temperatures indicated by the thermocouples alone. However, the temperature indicated by the pin in the green sand specimen had a maximum 100° F. higher than the dry sand specimen. The temperature of the pin in the green sand specimen, after reaching the maximum, decreased, and leveled off at a temperature slightly below that held by the dry sand specimen.

Under all conditions tested, the temperatures indicated were considerably above that of the furnace temperature control setting.

Attempts were made to obtain the temperatures of the pins and specimens at control temperature setting of 2500° F. After an exposure of 6 min. the thermocouple (chromel-alumel) ceased to function at 2600° F. on a steeply rising part of the curve. Difficulty in obtaining the necessary thermocouple wires has delayed this particular part of the test. If the tests to be conducted at a temperature control setting of 2500° F. indicate the same magnitude of overshooting the control setting, as found at 2000° F., the pin temperature may reach the melting point.

### Curve Differs

The exposure time-temperature curve may be different for the various sand mixtures used in foundries. Also the curve may differ as to whether the specimen to be tested was oven dried or baked at some temperature above 212° F. In addition, it would be an almost endless task for one individual to test all the mixes and various treatments given those mixes. It would be a great help to the writer if many individuals would obtain the time-temperature data on the mixes in which they are interested, and forward the complete data to the writer. Undoubtedly the accumulated data would be an additional aid to the Subcommittee on the Physical Properties of Steel Foundry Molding Sands at Elevated Temperatures.

The type of test reported here can be made in any furnace, such as a muffle or heat-treating, that will provide the desired furnace temperature. Those who do not have the  $1\frac{1}{8} \times 2$ -in. rammer can make these tests using the  $2 \times 2$ -in. specimen. In addition, those individuals inter-

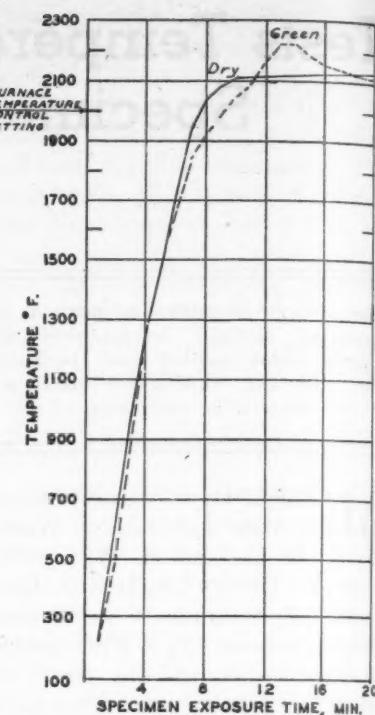


Fig. 3—Variation of Temperature of Metal Pin with Exposure Time When Pin Is Inserted Into a Green or Dry Sand Specimen.

ested in the linear expansion can make that test at the same time the internal temperatures of the specimen are being taken.

### Conclusion

The object of this paper is:

1. To illustrate one method of determining the temperatures attained within the  $1\frac{1}{8} \times 2$ -in. specimen.
2. To show that, for the particular mix tested, the maximum temperatures indicated were appreciably higher than the furnace temperature control setting.
3. To indicate the type of test herein reported can be made with either of the two usual molded sand specimens and can be made in any suitable furnace.
4. To enlist the aid of the foundrymen to obtain this information for the various sand mixes used.

### SERVING A.F.A.

Service on A.F.A. Committees benefits the industry and reflects honor upon those who give unselfishly of their knowledge. Committees for the 1944-45 season are being formulated—send your name and qualifications to National Headquarters, if you are willing to participate in committee work.

# Present and Post-War Apprenticeship Standard

By Wm. F. Patterson, Director, Apprentice Training Service, War Manpower Commission

*A staunch supporter of the promotion of apprenticeship in industrial work for many years, Wm. F. Patterson has long evinced an interest in apprentice training for the foundry field. His presentation of this paper at the War Production Manpower Session, 3d War Production Foundry Congress, held at Buffalo, April 25-28, gave added impetus to the growing movement for more extensive apprenticeship training in the foundry industry.*

future foremen, superintendents and managers will be selected. Apprenticeship has played an important part in handing down foundry skills from generation to generation. I believe that as management, labor and interested government agencies gain more experience with the training problems of the foundry industry, it will be possible to evolve even better programs and techniques of training.

## 850,000 German Apprentices

As many of you are aware, our national apprenticeship program scarcely had been launched before the war clouds rolled across the horizon. Meanwhile the German industrial machine had been training more than 850,000 apprentices yearly during the preceding decade, and Japan long had used a military type of industrial apprenticeship to develop its skilled technicians.

Pearl Harbor stepped up the tempo of American industry close to the breaking point, as we sought to catch up to and out-produce our enemies. Unfortunately, in the development of our national apprenticeship program, it was impossible to anticipate the unprecedented wartime need for skilled mechanics. The ranks of available advanced apprentices, however, did add materially to the nucleus of skilled mechanics and technicians who were called upon to train the army of war production workers called to the industrial front.

## Simplified Training

Simplified on-the-job training programs to teach inexperienced, unskilled or semi-skilled workers how to do the task at hand had to be devised. Because of the experience gained and techniques which we had developed in the field of apprenticeship, the assistance of the Apprentice Training Service has been sought in connection with the establishment of more than 1500 such advancing worker programs. Some of these programs have been utilized in the foundry industry to fill the gaps left by shortage of skilled workers.

Many of these training plans require the adoption of supplementary

bargaining agreements and, in this connection, I should like to say that the Apprentice Training Service has found the International Union of Molders and Foundry Workers of North America and its national and local officers most helpful and understanding in matters concerning either apprenticeship or formalized upgrading.

The entry of women into occupations previously foreign to them, has posed special problems, although it is true that women have been employed in certain foundry jobs in years gone by, notably in the core-making department. Industrial prejudices and trade traditions, built up over scores of years, have fallen by the wayside under pressure of wartime necessity.

## A.F.A. Committee Helps

The American Foundrymen's Association has given much through its Apprentice Training Committee, to the stimulation and strengthening of apprenticeship for the industry. I have sat in with this committee many times and have noted a realistic and dynamic approach to the apprenticeship problem. There can be no question but that its influence has resulted in a greater amount and an improved quality of apprenticeship work going on in the plants of association members.

In general, however, we cannot help but feel that if we had adopted our national apprenticeship program ten years, or more, previous to the outbreak of war, results would have



Wm. F. Patterson

Twenty years ago I sat as a member of the Apprentice Committee of the American Foundrymen's Association in a meeting in Milwaukee. Virtually all of the men who then served on that committee are still active in the promotion of apprenticeship by your association.

The American Foundrymen's Association has been keeping in extremely close contact with W.P.B. Apprentice Training Service, to be aware of trends, developments, and needs for the industry. The Association should be complimented for its cooperation and assistance to government agencies, including the Apprentice Training Service, whenever we have asked for help.

Today, as never before, in the course of industrial history, we have been made aware of our personnel training problems. Although these problems existed before, wartime manpower shortages brought them into sharp relief. Your industry, because of the nature of its work, has posed particularly critical problems at times. Many of the problems have been a challenge to those concerned with the procurement and training of workers.

## Benefits of Training

Your Association is to be complimented for the place which both foremanship and apprenticeship training have been given in your program. It also strikes me that, from the list of technical and research subjects to be considered by your Foundry Congress, could be drawn much practical material for teaching your advanced apprentices the "how" and "why" of foundry practices.

From these boys, many of your

JULY, 1944

been better. Part, at least, of the war waste attributable to use of poorly or partly trained workers might have been avoided.

Notwithstanding these manpower handicaps, the monumental achievements of American industry—the scores of new training and industrial facilities, the hundreds of merchant and war craft, the thousands of planes and vehicles, the millions of small arms and supplies, and the billions of bullets, shells and bombs produced—have become a part of history.

#### **Increasing Training Problem**

The problem of training, however, always remains. It is never static. It changes with the fluctuating demands of industry, with the requirements of war or peace, with the types of machines and with the processes and personnel available. Today we are experiencing the full impact of war on all of our preconceived ideas and traditions of industrial training.

Apprenticeship, together with other types of trade and industrial education, has felt the effects of that war. Thousands of apprentices have been lost temporarily to industry through enlistment or induction into the armed services. Many expedients have had to be used to keep necessary apprenticeship programs even partially staffed.

In view of recent Selective Service rulings there will be even greater personnel and training problems in the next few months. I speak particularly of the heavy draft from the ranks of younger men previously deferred. The personnel situation will be far from ideal for industry from now until the closing phases of the war.

#### **Increasing Labor Problem**

It is more likely to get worse than to get better. It will demand every available ounce of industrial genius to obtain the best results from the help that will be usable. Many shops have learned that deferments were just that and nothing more, that depending on deferred workers without training replacements, however imperfect, was merely existing on borrowed time. It was a loan certain to be called in the interest of the manpower needs of our military forces.

This "draft" should in the final analysis do the national apprentice-

ship program a good turn. Thousands of employers will have gained a better appreciation of the value of planned training. They realize today, as never before, the extra cost which comes from working with "green hands" and from permitting haphazard job learning.

Apprenticeship has been the traditional way of learning the foundry trades. It is because management now realizes the significance of training that we foresee a renaissance in apprenticeship, under modern standards, such as this nation never before has seen.

I find it most encouraging to note how well apprenticeship standards are weathering wartime adversity. Local joint apprenticeship committees have sought to keep their programs going with those apprentices still untouched by the Selective Service, and by the addition, where practicable, of new apprentices from the 4-F and older age groups. More recently, discharged veterans have become available. It is not only desirable but a patriotic duty to give these men every consideration for trade training.

#### **Consideration of Veterans**

One cannot consider the relationship of the veteran to apprenticeship without considering the future of apprenticeship and industrial training itself. With the coming of peace, we will face a period of intense civilian industrial activity.

For many among the younger veterans, men who have been accustomed to an active military life and have aptitudes for the trades, apprenticeship should have a strong appeal. Here is both activity and training, an opportunity to actually get out and around where the work is being done and have a hand in it from the beginning.

Many standards of apprenticeship already have been written or modified to provide special consideration for the returned veteran. Both management and labor are cognizant of their responsibilities to these men. Already several hundred returned veterans of World War II have been employed under apprenticeship standards and the movement has just begun.

Speaking of the responsibilities of management and labor, particularly with respect to the post-war period, I should like to compliment your in-

dustry upon its constructive approach to the technical and personnel phases of your problems as evidenced by the work of the Foundry Congress.

There are those who scoff at planning, and there are others who feel that every foot of our future course can and should be charted. While I realize that it is difficult to blueprint any structure of action involving human nature, I certainly do not take a defeatist attitude toward planning, especially planned training.

When materials are released and post-war production begins we shall probably experience a boom of considerable proportions, extending for several years, if economists are right in their predictions. Not much of this is likely to be cost-plus work, however, and the demand of industry will be for greater and greater skill among the various trades involved.

#### **Organized Training**

Up to this time I have been speaking of apprenticeship, the formal type of on-the-job training, supplemented by technical instruction. For sometime now we have been encouraging industry, both management and labor, to get apprenticeship programs in order, to have them ready to put into operation at the first moment men and materials become available.

In addition to this, however, I see a post-war need for extending organized training to other workers. Many of them, although classed as skilled at present, only have had haphazard training. Some of these may have been in industry for years; others came as additions during the war and will want to stay. Plans need to be worked out which will provide these workers with the kind of training that will raise them to the level of competence the foundry industry will demand in the post-war era.

As a result of our wartime experience we, in Washington, are getting a more lucid picture of the over-all training problem which is facing industry. In the Apprentice Training Service, of course, we are particularly interested in the problem of maintaining and building up the nation's force of highly skilled craftsmen and industrial workers.

To carry out the functions Congress entrusted to us, it is necessary that we have at least a reasonable

approximation of the job ahead of us, what it is in total and again what it is by industry. Our best source of information at present is the U. S. Census reports, and from them we have tried to make estimates.

#### 200,000 Apprentices Yearly

According to the figures available, the nation's skilled labor force consists of 5,284,900 workers. To maintain that skilled force, more than 600,000 apprentices would be needed, and more than 100,000 should be graduated each year into the ranks of the skilled craftsmen.

From the records available in one of our states, we estimate that to keep 600,000 apprentices constantly in training, while graduating over 100,000, would require the addition of 200,000 apprentices to the program each year. We believe this ratio of loss between entrance and graduation is too high, but it is based on our experience records.

It is, however, a challenge to better selection and more effective apprenticeship programs under modern standards. Further, it is a challenge which demands that better records be kept. It is imperative that we know to what extent the skilled labor force is maintained. We should know how many apprentices leave their training each year, how many become skilled workers, etc.

#### Foundry Apprentices

Turning now to the foundry industry, we find the 1940 census recorded 87,600 skilled molders and coremakers - workers employed among 11,000 foundries. Application of our formula to this situation indicates a need for keeping more than 10,300 foundry apprentices in training yearly. About 1,500 would graduate and 3,700 new apprentices would be needed each year to keep the program staffed.

Whether the need for yearly additions to the trades in your industry is 3,700 or a figure somewhat less than that, there still remains a sizeable training job.

I should like to extend to the foundry industry an invitation to make full use of the Apprentice Training Service for working out and maintaining your current and post-war training programs.

You will find our staff competent and eager to assist you with your

apprentice and short-term training problems. We do not claim to know all the answers, but we will try to help you find the right one. We function only in a consulting capacity, and we have no power or desire to tell you what you must do.

However, we are interested in

what is sound and practicable in industrial apprenticeship and training, for the good of the apprentice, for industry and for our nation. If we can continue to assist industry in that field, we will have served the purpose for which the Apprentice Training Service was created.

## Canadian Foundrymen Cooperate With School in Education Program

FOR the past six months the Eastern Canada and Newfoundland Chapter of A.F.A. has taken an active part in foundry students activities at the Montreal Technical School. Through the group's Educational Committee, headed by W. G. Burgess, Jenkins Bros. Ltd., Montreal, excellent missionary work has been accomplished in influencing technical students to choose foundry work as a career.

During the six-month span 158 first-year students of the school have visited foundries in the Montreal district, including the Dominion Engineering Works, Ltd., James Robertson Co., Warden King Limited, Robert Mitchell Co., Ltd., Crane Limited, Montreal Bronze Limited, and the Canadian Car & Foundry Co., Ltd. Groups of 15 to 30 students, accompanied by their instructors, toured the plants to acquire a first-hand knowledge of the various types of foundry work.

Another important phase of the educational program was a joint chapter-student meeting held at the school, when the foundrymen had an opportunity to fraternize with the boys and point out the advantages that are available in the foundry industry.

The Eastern Canada and Newfoundland Chapter, in conjunction with the Montreal Technical School, also sponsored a junior patternmakers and molders contest in the Montreal area. The contest was limited to competitors under 21 years of age and divided into three classes—those having foundry experience, of two, three or four years. This good-will building competition was under the supervision of the school instructors.

H. Beaupre, director of the school, and his staff of foundry instructors—Emile Cotuer, A. Allard and N. Prunier—deserve much credit for the outstanding success of the program during the past season.



The progress of the students educational program, fostered by the Eastern Canada and Newfoundland Chapter in conjunction with the Montreal Technical School, is due to the feeling of fellowship which exists between foundrymen and the students. Among those who cooperated in the movement are (top row, left to right) N. E. Prunier, D. E. Allard, E. Coteur, instructors at the school; C. C. Brisbois, Robert Mitchell Co., Ltd.; H. Beaupre, Director of Montreal Technical School; E. N. Delahunt, Chapter Chairman, Warden King, Ltd.; W. G. Burgess, Chairman of Educational Committee, Jenkins Bros., Ltd.; G. Ewing Tait, Dominion Engineering Co., Ltd.; A. E. Cartwright, Robert Mitchell Co., Ltd., and W. J. Brown, Robert Bartram Co., Ltd.

# New Association Members

(May 16 to June 15, 1944)

Evidently workers of the Detroit Chapter's Membership Committee are reluctant to relinquish first place in the recording of new members, for again the group is out in front by a wide margin. In the period just closed, out of a total of 115 new members, 21 resulted from the efforts put forth by the Detroit crowd—certainly they are deserving of that proverbial orchid!

## CANTON DISTRICT CHAPTER

W. J. Ahlquist, Massillon Steel Castings Co., Massillon, Ohio.  
John F. Cservenyak, Foundry Foreman, Pitcairn Co., Barberton, Ohio.  
Robert A. Epp, Foreman, American Steel Foundries, Alliance, Ohio.  
Chas. P. McCafferty, Pitcairn Co., Barberton, Ohio.  
Andrew Pasavac, Jr., Core Room Foreman, Pitcairn Co., Barberton, Ohio.  
Al. J. Phipps, Dist. Representative, Mexico Refractories Co., Canton, Ohio.  
C. E. Shaw, Works Engineer, American Steel Foundries, Alliance.

## CHESAPEAKE CHAPTER

Constant Sakakini, Assoc. Marine Engr., U. S. Navy Yard, Portsmouth, Va.  
Walter Clarence Weygandt, Molder, Norfolk Navy Yard, Portsmouth.

## CHICAGO CHAPTER

Harry Butterworth, Core Room Foreman, Food Machy. Corp., Sprague-Sells Div., Hooperston, Ill.  
Kenneth Butts, Cleaning Room Foreman, Food Machy. Corp., Sprague-Sells Div., Hooperston.  
William Ferguson, Pattern Dept. Foreman, Food Machy. Corp., Sprague-Sells Div., Hooperston.  
\*Food Machinery Corp., Sprague-Sells Div., Hooperston, Ill. (Harold Cade, Foundry Foreman).  
Charles Goodman, Casting Buyer, Chicago Pump Co., Chicago.  
Yung K. Lee, Apprentice, Continental Foundry & Machine Co., E. Chicago, Ind.  
John M. Neff, Resident Engineer, U. S. Gypsum Co., Chicago.  
A. J. Peterson, Apex Smelting Co., Chicago.  
K. G. Philippe, Materials Engineer, Allis-Chalmers Mfg. Co., Springfield, Ill.  
Charles A. Venskus, Sand Lab. Tech., Chrysler Corp.-Dodge Chicago Plant, Chicago.  
W. R. Williamson, Consulting Engineer, Chicago.

## CINCINNATI DISTRICT CHAPTER

\*The Black-Clawson Co., Hamilton, Ohio (Clarence Klug, Foundry Supt.).  
Joseph S. Schumacher, Chief Engineer, The Hill & Griffith Co., Cincinnati.

## DETROIT CHAPTER

Edward Calt, Division Foreman, Ford Motor Co., Dearborn, Mich.  
C. H. Case, Chief Inspector, Buick Motor Co., Flint, Mich.  
Russell C. Davis, Chrysler Corp., Detroit.  
David F. Devlin, Melter Foreman, Ford Motor Co., Dearborn, Mich.  
H. E. Elliott, Met., The Dow Chemical Co., Midland, Mich.  
Henry E. Epley, Representative, N. Ransohoff, Inc., Detroit.  
Stuart F. Frensdorff, Met., Saginaw Malleable Iron Div. G.M.C., Saginaw, Mich.  
G. E. Holdeman, Met., The Dow Chemical Co., Midland, Mich.  
Edgar C. Jeter, Met., Ford Motor Co., Dearborn, Mich.  
Charles V. Kilburn, Eng., Detroit Electric Furnace Div., Kuhlman Electric Co., Bay City, Mich.  
Charles Edward Kimmel, Met., The Dow Chemical Co., Midland.  
J. H. McNulty, Tech. Officer, Inspection Board U.K. of Canada, Detroit.  
John G. Mezoff, Met., The Dow Chemical Co., Midland.  
Walter N. Renshaw, Chemist, Saginaw Malleable Iron Div., G.M.C., Saginaw.  
Louis Roncher, Quality Control, Ford Motor Co., Rouge Plant, Dearborn, Mich.  
Henry H. Root, Jr. Met., Saginaw Malleable Iron Div., G.M.C., Saginaw.  
Louis F. Roth, Met., Detroit Diesel Engine Div., G.M.C., Detroit.  
Bruce W. Schafer, Service Engineer, Detroit Electric Furnace Div., Kuhlman Electric Co., Bay City.  
Arthur A. Somers, Representative, N. Ransohoff, Inc., Detroit.  
\*Walker Metal Products Ltd., Walkerville, Ont., Canada (H. H. Gregory, Gen. Mgr.).  
Glenn C. Wiese, Chief Chemist, Saginaw Malleable Iron Div., G.M.C., Saginaw.

## EASTERN CANADA and NEWFOUNDLAND CHAPTER

A. Cote, Manager, Magog Foundry, Magog, Quebec.  
Dennis Fleming, Partner, Fleming Brothers, Halifax, N. S.  
George V. Gray, Supt., Hillis & Sons, Ltd., Halifax.  
Lambert Mason, Owner, Dartmouth Iron Foundry, Dartmouth, N. S.  
Thomas A. McLean, Dominion Steel & Coal Corp., Ltd., Sydney, N. S.  
\*Benfrew Machinery Co., Ltd., Renfrew, Ont. (E. Vandecan, Fdry. Supt.).  
John A. Renton, Dominion Steel & Coal Corp., Ltd., Sydney.

\*Company Members

## NORTHEASTERN OHIO CHAPTER

Glenwood Beckwith, Experimental Fdry. Engr., National Aluminum Cylinder Head Co., Cleveland.  
\*Copperweld Steel Co., Steel Div., Warren, Ohio (S. D. Williams, Exec. Vice-Pres.).  
\*The Hoffman Bronze & Aluminum Casting Co., Cleveland (R. T. Maneeley, Pres.).  
Roy T. Van Scoyoc, Molding Supv., The Forest City Foundries Co., Cleveland.

## NORTHERN CALIFORNIA CHAPTER

Robert G. Clement, Partner, United Pattern Works, San Francisco.  
Wm. A. Fletcher, Sales Mgr., Western Div., E. F. Houghton & Co., San Francisco.  
L. S. Rimington, Plant Mgr., Dalmo-Victor, Inc., San Francisco.  
Myron D. Soares, Foreman, Core Room, Pacific Steel Casting Co., Berkeley, Calif.  
George Vurek, Partner, United Pattern Works, San Francisco.  
Burnett Walker, Jr., Dir. of Sand Casting, Dalmo-Victor, Inc., San Francisco.

## N. ILLINOIS AND S. WISCONSIN CHAPTER

A. Gunnard Anderson, Foundry Supt., W. I. Davey Pump Corp., Rockford, Ill.

## ONTARIO CHAPTER

A. D. Hudson, Sales Engineer, Electro Metallurgical Co., Wolland, Ontario.  
Robert P. Quigley, Manager, Quigley's Foundry Sands, Bartonville, Ontario.

## PHILADELPHIA CHAPTER

\*Abrasive Company, Philadelphia (W. B. Ilko, Sales Mgr.).  
\*Hose Accessories Co., Philadelphia (Harry E. Shaw, Pres.).  
John Thomas Mooney, Asst. to Metallurgist, Dodge Steel Co., Philadelphia.  
Albert R. Mundorff, Designer-Engineer, Philadelphia.

## QUAD-CITY CHAPTER

La Verne Bensch, Foreman, Tri-City Pattern & Engineering Co., Moline, Ill.  
Harry W. Dreyer, Core Dept. Foreman, Frank Foundries Corp., Davenport, Iowa.  
George Harris, Prop., A. D. Harris Co., Rock Island, Ill.  
J. N. Heady, Sales Engineer, Midwest Foundry Supply Co., Edwardsville, Ill.  
Hilbert L. Hedin, Owner, Tri-City Pattern & Engineering Co., Moline.  
Henry A. Krambeck, Foundry Foreman, Frank Foundries Corp., Davenport.  
Charles E. Kunz, Pattern Maker, Frank Foundries Corp., Davenport.  
Charles P. Lepetit, Production Dept., Frank Foundries Corp., Davenport.  
C. R. Marthens, Owner, Marthens & Co., Moline, Ill.

## ROCHESTER CHAPTER

Edward T. Hudson, Bench Foreman, Progressive Foundry Works, Inc., Rochester, N. Y.

## ST. LOUIS DISTRICT CHAPTER

Elmer Godejohn, Foreman, St. Louis Malleable Casting Co., St. Louis.  
W. R. Lee, Watkins, Inc., Wichita, Kansas.  
W. H. Morse, Watkins, Inc., Wichita.  
W. K. Schweickhardt, Salesman, Walsh Refractories, St. Louis.  
Frank G. Weyforth, Asst. Sales Mgr., Laclede Christy Clay Products Co., St. Louis.

## SOUTHERN CALIFORNIA CHAPTER

J. W. Bowman, Foreman, Alameda Mfg. Co., Los Angeles.  
Eugene E. French, Supv., Haberfelde Steel Co., Bakersfield, Calif.  
A. M. Hallquist, Supv. of Metals, U. S. Electrical Motors, Inc., Los Angeles.  
William H. Hopper, Co-Owner, South Gate Pattern Co., South Gate, Calif.  
Alfred A. McKay, Molder Foreman, Haberfelde Steel Co., Bakersfield, Calif.  
Lester Rankin, Mgr., Alameda Mfg. Co., Los Angeles.

## TEXAS CHAPTER

W. M. Delaney, Hughes Tool Co., Houston.  
Edwin C. Sanders, Pattern Storage Supv., Hughes Tool Co., Houston.

## WESTERN MICHIGAN CHAPTER

Fred H. Papke, Wolverine Brass Works, Grand Rapids, Mich.

## WESTERN NEW YORK CHAPTER

Ray Blair, Pattern Foreman, Lancaster Malleable & Steel Corp., Lancaster, N. Y.  
William Blessing, Finishing Foreman, Lancaster Malleable & Steel Corp., Lancaster.  
Anthony Bonach, Jr., Annealing Foreman, Lancaster Malleable & Steel Corp., Lancaster.  
Edgar A. Brandt, Met., Electro Metallurgical Co., Pittsburgh, Pa.  
Geo. Brown, Finishing Foreman, Lancaster Malleable & Steel Corp., Lancaster.  
Roland Forsyth, Works Mgr., Bison Castings, Inc., Buffalo.  
William Gessert, Foundry Foreman, Lancaster Malleable & Steel Corp., Lancaster.

AMERICAN FOUNDRYMAN

Howard Lathrop, Met., Lancaster Malleable & Steel Corp., Lancaster.  
Robert H. Livengood, Tech. Asst., Metal & Alloy Specialties Co., Inc., Buffalo.  
Andrew Miller, Foundry Foreman, Lancaster Malleable & Steel Corp., Lancaster.  
Joseph Mullaney, Melting Foreman, Lancaster Malleable & Steel Corp., Lancaster.  
Milton P. Schemel, Finishing Dept., Symington-Gould Corp., Depew, N. Y.  
Joseph Schwartz, Inspection Foreman, Lancaster Malleable & Steel Corp., Lancaster.  
James Sullivan, Core Room Foreman, Lancaster Malleable & Steel Corp., Lancaster.

#### WISCONSIN CHAPTER

Kenneth M. Favell, Research Dept., Allis-Chalmers Mfg. Co., West Allis, Wis.  
Francis C. Potts, Mgr., Potts Foundry Co., Sheboygan, Wis.

#### OUTSIDE OF CHAPTER

Alfred G. Baillot, Esq., Chief Draftsman & Chemist, Messrs. Foundry Equipment, Ltd., Leighton Buzzard, Beds, England.  
\*British Moulding Machine Co., Ltd., Eaversham, Kent, England (Victor L. Cashmore, Director).  
R. M. Coleman, Gen. Mgr., McIlwraith Industries Pty., Ltd., Waterloo, N.S.W., Australia.  
Frederick Algar Ladbury, Melbourne, Victoria, Australia.  
Harry McDowell, Ross-Meehan Foundries, Chattanooga, Tenn.  
William Moore, Service Engineer, Cooper Engineering, Ltd., Satara, India.  
Maurice Novinsky, Sao Paulo, Brazil, S.A.  
\*Richmond Radiator Co., Inc., Uniontown, Pa. (L. C. Thunford, Mgr., Production & Manufacture).

#### Manhattan Rubber Gets Army-Navy "E" Renewal

WORD that its Army-Navy "E" award for meritorious service on the production front has been renewed, was received by the employees of The Manhattan Rubber Mfg. Div., Raybestos-Manhattan, Inc., Passaic, N. J., in a letter from Robert P. Patterson, Under Secretary of War.

The company was presented the original award giving it the right to display the Army-Navy "E" burgee on October 28, 1943, the 50th Anniversary of its founding. The White Star, which the renewal adds to the burgee, signifies that Manhattan employees have continued to maintain the high production standard which won the original award, and it is a symbol of appreciation from the Armed Forces.

#### Award to Robert Hoerr In Apprentice Contest

THE Apprentice Contest Committee, in making a final check of the averages of the national judges' ratings for the patternmaking entries submitted in the national apprentice competition at Buffalo, showed that an error had been made in the original count. The recalculation indicates that a second prize in the patternmaking division should have been awarded to Robert Hoerr, Caterpillar Tractor Co., Peoria, Ill., for the excellence of his entry. Recognition for his fine work and the award have been given to Mr. Hoerr.

#### Book Review

*The Journal of the Iron and Steel Institute*, Vol. CXLVII, No. 1, 1943. Published at the Offices of the

Institute, 4 Grosvenor Gardens, London, S.W. 1.

Section I of this volume is entitled "Minutes of Proceedings and Papers of the Iron and Steel Institute." In addition to the minutes of the proceedings, it contains fourteen technical papers and one committee report.

Section II of the volume, entitled "A Survey of Literature on the Manufacture and Properties of Iron and Steel, and Kindred Subjects," consists of abstracts of technical literature.

H. L. Wren, Secretary-Treasurer of the Texas Chapter, has severed his association with Barada & Page, Inc., Houston, to join the staff of the Beaumont Cement Sales Co., Beaumont, Texas.

#### Past A. F. A. President Merits Government Award

BIG. Gen. Thomas S. Hammond (I.N.G., Ret.) chief of the Chicago Ordnance District, and past A.F.A. National President, was personally decorated last week by Lt. Gen. Brehon B. Somervell, Commanding General, Army Service Forces, with the War Department award for meritorious civilian service.

General Hammond resigned as president and general manager of the Whiting Corporation, Harvey, Ill., in January, 1942, to become the Chicago Ordnance District's production advisor. In July of that year he was appointed deputy district chief, and in August, 1942, he assumed the position of district chief.



Lt. Gen. Brehon B. Somervell (left), commanding general, Army Service Forces, presents the War Department award for meritorious civilian service to Brig. Gen. Thos. S. Hammond (I.N.G., Ret.), chief of the Chicago Ordnance District and Past President of A.F.A. Onlookers are Maj. Gen. T. J. Hayes (second from left), chief of industrial division, Army Service Forces, and Col. John Slezak (right), deputy chief, Chicago Ordnance District.

# CHAPTER ACTIVITIES

## News

See page 16 for list of  
Chapter representatives  
whose reports of local activi-  
ties appear in this issue.

### Saginaw Valley Organization Meeting Is Attended by National Officers

By H. H. Wilder

Two hundred and fifty foundrymen attended the first meeting of the Saginaw Valley section of the Detroit Chapter, May 26, at Fisher's Hotel, Frankenmuth, Mich. The new group, which is the first of its kind in the association, had an organization dinner at which officers and directors for the district were elected.

Beginning next fall a regular monthly schedule of local meetings will be held to supplement those sponsored by the main chapter in Detroit. Prior to the formal opening meeting, the temporary chairman for the group was H. G. McMurry, Buick Motor Div., General Motors Corp., Flint, who made arrangements for the organization dinner and meeting.

The following members, recommended by the nominating committee, were elected by unanimous vote:

**Chairman**—Chas. Morrison, Saginaw Malleable Iron Div., General Motors Corp., Saginaw.

**Vice-Chairman**—E. T. White, Bostick Foundry Co., Lapeer, Mich.

**Secretary-Treasurer**—H. G. McMurry, Buick Motor Div., General Motors Corp., Detroit.

*Directors for three-year term:*

Frank Brewster, Dow Chemical Co., Midland.

John Smith, Chevrolet Gray Iron Foundry, Saginaw.

C. A. Tobias, General Motors Institute, Flint.

*Directors for two-year term:*

R. H. Mooney, Saginaw Malleable Iron Div., General Motors Corp., Saginaw.

A. E. Rhoads, Kuhlman Electric Co., Bay City.

E. Wise, Baker-Perkins, Inc., Saginaw.

*Directors for one-year term:*

A. D. McCaughna, General Foundry & Mfg. Co., Flint.

M. V. Chamberlin, Dow Chemical Co., Saginaw.

E. L. Waterhouse, Eaton Manufacturing Co., Vassar.

Following the dinner, R. G. McElwee, Vanadium Corp. of America, Detroit, Chairman of the Detroit Chapter, explained some of the mechanics necessary for the start of the venture. F. J. Walls, International Nickel Co., Detroit, Vice-President of A.F.A., spoke briefly on "Youth's Place in the Foundry Industry." As a special guest of the evening, R. J. Teetor, Cadillac Malleable Iron Co., Cadillac, Mich., the National President, complimented the group on the large turnout and the excellent planning which made possible such a successful first meeting.

### Round Table Meeting At Western New York

By J. Ralph Turner

WITH convention activities reduced to reminiscences and belated compliments for a job well done, the Western New York Chapter settled down to a routine technical meeting, May 12, at Hotel Touraine, Buffalo.

Jas. L. Yates, Worthington Pump & Machinery Corp., Buffalo, served as technical chairman of the evening for a panel discussion on "General Foundry Problems." Mr. Yates stated that one of the most prevalent foundry problems at the present time is the manpower shortage, and mentioned the movement that has been started in Buffalo to band together all technical societies in the hope of securing the proper facilities in schools for training metallurgists, foundrymen and other technical workers. He then introduced the following discussion leaders:

**Steel**—James Begley, Pratt & Letchworth, Buffalo; Jos. H. Sander, American Radiator & Standard Sanitary Corp., Buffalo.

**Gray Iron**—E. A. Piper, Pohlman Foundry Co., Inc., Buffalo.

**Malleable**—J. C. Goetz, Acme Steel & Malleable Iron Works, Inc., Buffalo.

**Non-Ferrous**—H. R. King, Metal & Alloy Specialties Co., Inc., Buf-



(Photo courtesy Art Allen, Penton Publishing Co.)

Section of speakers' table at Organization Dinner of the Saginaw Valley group: (left to right) R. G. McElwee, Vanadium Corp. of America, Detroit, Chairman of the Detroit Chapter; H. G. McMurry, Buick Motor Div., General Motors Corp., Detroit, Secretary-Treasurer of the Saginaw Valley Group; F. J. Walls, International Nickel Co., Detroit, National Vice-President; R. J. Teetor, Cadillac Malleable Iron Co., Cadillac, Mich., National President; H. S. Austin, Buick Motor Co., Flint; and A. E. Rhoads, Detroit Electric Furnace Div., Kuhlman Electric Co. A crowd of 250 attended the organization meeting.

falo; J. C. McCallum, McCallum-Hatch Bronze Co., Inc., Buffalo.

Mr. Begley spoke on inspection of castings by radium, and several slides were shown by F. J. Macano, Pratt & Letchworth Co. Several steel castings were on display, and Mr. Sander spoke on the William's riser. This riser has a permeable core extending about 1-in. into the riser, which allows air to exert atmospheric pressure on the molten metal in the riser and thus readily drain into the casting. According to the speaker, a higher yield, lower cleaning cost, and cleaner metal are obtained through the use of this riser.

Discussing gray iron, Mr. Piper spoke on experiments in reducing atmosphere on mold surface to get better finish on castings.

In the non-ferrous field, Mr. McCallum pointed out that new specifications are used on Navy orders, and Mr. King led a discussion on pure copper castings, risers and aluminum.

## Annual Election Held By Quad City Chapter

By H. L. Creps

THE Quad City Chapter held its monthly meeting at the Fort Armstrong Hotel, Rock Island, Ill., on May 15, with 82 members and guests in attendance. A short after-dinner entertainment, a colored moving picture, proved interesting to the audience.

Then came the annual election of officers, with the following results:

*Chairman*—R. E. Wilke, Deere & Co., Moline, Ill.

*Vice-Chairman*—C. E. Von Lahrte, Chicago Retort & Fire Brick Co., Davenport, Ia.

*Secretary-Treasurer*—H. L. Creps, Frank Foundries Corp., Moline, Ill.

*Directors for three years:*

A. H. Putnam, A. H. Putnam Co., Rock Island, Ill.

F. W. Shipley, Caterpillar Tractor Co., Peoria, Ill.

W. E. Jones, Ordnance Steel Foundry, Bettendorf, Ia.

*Director for one year:*

J. N. Johnson, Union Malleable Iron Co., East Moline, Ill.

Speaker for the evening was C. E. Sims, Battelle Memorial Institute, Columbus, O., who spoke on "Steel Castings of Today." In his discussion of present day melting practices, the speaker mentioned the higher percentages of alloys found in scrap.

He also discussed the increasing percentage of sulphur, and said that

future trends will probably be towards more basic steels. The mention of an acid slag, deoxidation and hydrogen effects were covered thoroughly during the talk. Mr. Sims stated that the greatest single contribution to the art of molding during recent years has been the development of the blind riser. The meeting was concluded after an interesting question and answer period.

## Wisconsin Honors Old Timers and Youngsters

ON THE Wisconsin Chapter's list appear the names of 84 "old timers," those men who have seen service of 50 years or more in the foundry field. Among this total number of veterans, only five names are entered on retired lists.

Annually these pillars of the industry are honored at a dinner given by the Wisconsin Chapter, and this year 64 "old timers" attended the May 12 event given at the Schroeder Hotel, Milwaukee, May 12.

Coupled with the old was the new, for apprentices, too, were feted at the dinner. Forty young men, some winners in the national and local apprentice contests, shared the spotlight with the older men at an impressive ceremony.

The work of George Dreher, Ampco Metal, Inc., Milwaukee, retiring chairman of the group, was publicly acclaimed through the presentation of a certificate of merit by members of his chapter "in recognition of service to the Wisconsin Chapter and the American Foundrymen's Association."

## Round Table Meeting Featured by Ontario

By G. L. White

ANOTHER of its successful group meetings was held by the Ontario Chapter at the Royal Connaught Hotel, Hamilton, on March 31.

In the gray iron section, C. O. Williamson, Grinnell Co. of Canada, Ltd., Toronto, acted as Chairman, with D. Callander, Callander Foundry and Manufacturing Co., Ltd., Guelph, the discussion leader. Mr. Callander spoke about the skill required in the foundry business as exemplified in the manufacture of small castings. Instances described the use of match plate molding in the production of simple castings, and it was shown that there were important problems involved in securing economical production of sound castings.

C. O. Williamson also participated in the program, outlining methods employed by his company in the production of grenade castings.

At the malleable group meeting, N. J. Dunbeck, Eastern Clay Products, Inc., Eifort, Ohio, discussed American synthetic sand practice, with particular reference to malleable founding operations.

As generally used in American foundry practice, the term "synthetic sand" covers any sand which is made in the foundry as required from materials selected and proportioned by the foundrymen to best suit his particular needs. Common practice in making synthetic sand is to add to used sand enough clay



The Wisconsin Chapter's "Old Timers"-Apprentices Annual Dinner brought together men with 50 years of service in the foundry and youngsters just beginning foundry careers.

bond to restore strength and enough silica sand to keep up volume.

Mr. Dunbeck discussed in some detail the selection of types of clay for bonding. The various classes of clays available were outlined and choices of clay given for different types of metal. Application was also discussed, including sand heaps, sand handling systems, facing sand, and sand reclamation.

In the non-ferrous section, M. H. Berns, Electro Refractories and Alloys Corporation, Buffalo, described the use and care of crucibles. He pointed out that low initial cost, versatility, flexibility of operation, and the cleanliness of the metal poured, give crucibles an advantage over other types of melting.

Crucibles for non-ferrous smelting are usually clay and graphite, composed of about half graphite and half clay; or carbon bonded, silicon carbide, composed of graphite, silicon carbide and a glassy covering to prevent oxidation. Mr. Berns described the care of crucibles under a number of headings, including receipt and storage, in the furnace, and during pouring.

## Central N. Y. Group Studies Foundry Sand

By E. G. White

CHAIRMAN N. H. Boardman, Elmira Foundry Co., Inc., Elmira, N. Y., presided at the regular meeting of the Central New York Chapter, held May 12 in the Roof Garden of the Onondaga Hotel.

After the reading of a proposed change in the chapter by-laws by Secretary E. G. White, Crouse-Hinds Co., Syracuse, and the usual chapter reports, Douglas Williams, A.F.A.

Fellow at Cornell University and a Central New York chapter member, discussed foundry sands. Mr. Williams highlighted the main points of a paper, "Progress Report on Investigation of Elevated Temperature Properties of Steel Foundry Sands," which he presented at the 3rd War Production Foundry Congress.

He pointed out the necessity of following the standard test procedure when different laboratories are doing the same work; otherwise, errors are introduced which make it impossible to compare results. He also discussed the principal points of a new high-temperature furnace which is under construction at the University.

## Cincinnati Reports Two Chapter Meetings

By M. F. Milligan

EIGHTY-FIVE foundrymen attended the regular monthly meeting, May 8, at the Engineering Society Headquarters, Cincinnati. This meeting was divided into two parts, the first of which included the showing of three sound films, produced by the General Motors Corp.: "Diesel, the Modern Power," "Sand and Flame," and "How Not to Conduct a Meeting."

Motion pictures were also featured during the final half of the program when, "Symphony in Brass and Bronze," a study produced by H. Kramer & Co., Chicago, was presented. Wm. Romanoff, who is associated with H. Kramer & Co., was on hand to conduct a discussion period.

### June 8 Meeting

Chapter Chairman E. H. King, Hill & Griffith Co., Cincinnati, pre-

sided at the annual stag picnic, held at the Summit Hills Country Club, Fort Mitchell, Ky. There was a diversification of pastimes for the 200 members and guests, including golf, baseball, horseshoe contests and other sports. A chicken dinner, served in the club dining room, highlighted the program.

## Twin City Chapter Holds Final Meeting By Alexis Caswell

A. M. FULTON, Northern Malleable Iron Co., St. Paul, was elected to the chairmanship of the Twin City Chapter at the May 25 meeting, held at the Midway Club, St. Paul. Assisting Mr. Fulton with the group's activities will be:

Vice-Chairman—R. C. Wood, Minneapolis Electric Steel Castings Co., Minneapolis.

Secretary-Treasurer—Manufacturers' Association of Minneapolis, Inc., Minneapolis.

The following were honored with posts on the board of directors:

C. H. Anderson, Crown Iron Works Co., Minneapolis.

I. F. Cheney, Griffin Wheel Co., St. Paul.

Herbert Larson, Minneapolis-Moline Power Implement Co., Minneapolis.

H. P. Patton, American Hoist & Derrick Co., St. Paul.

The guest speaker at this meeting was Dr. L. H. Ryerson, Professor of Chemistry, University of Minnesota, and Director of the Northwest Research Institute. Dr. Ryerson's subject was "Postwar Scientific Developments."

Other guests from the University of Minnesota were two members of the student body—C. H. Hauser and Harold Cooperman—winners of first and second prizes in the Chapter's student contest. Both of the young men presented their prize-winning papers.

## Radar Is Subject At Canton Meeting By G. M. Biggert

CANTON District Chapter's final meeting of the current season was held at the Elks Club of Canton, May 19, with an attendance of over 80 members and guests.

J. M. Reinhardt, director of the local office of the War Manpower Commission, after discussing some of the problems pertaining to industry in general, introduced Jas. P. Todd of Washington, D. C., utilization



Seventy-five members and guests attended the St. Louis Chapter's April 13 meeting at the DeSoto Hotel, when N. J. Dunbeck, Eastern Clay Products, Inc., Eifort, Ohio, was guest speaker.

consultant of the W.M.C. and the newly appointed director of Region 13. Mr. Todd spoke on "Problems Relating to Manpower and Employee Relations in the Foundry Industry."

A second guest speaker, Prof. F. J. Shollenberger, head of the department of physics at Mt. Union College, gave an instructive lecture on "Radar—What It Is and How It Works." After citing many instances in the present emergency where radar played an important part, he explained by simple illustrations and a miniature sending set just how the waves are "echoed" as they are reflected from various objects.

Professor Shollenberger pointed out that the post-war applications for radar were unlimited, but the greatest use would probably be to improve flying control of airplanes by better altitude measuring.



The Second Anniversary of the Eastern Canada and Newfoundland Chapter was celebrated at the April 21 meeting, which was attended by 250 members and guests.

W. Carson Adams, retiring chairman, installed the new officers who were elected for the coming season:

*Chairman*—J. T. Gilbert, Stockham Pipe Fittings Co., Birmingham.

*Vice-Chairman*—J. F. Wakeland, McWayne Cast Iron Pipe Co., Birmingham.

*Secretary-Treasurer*—F. K. Brown, Adams, Rowe & Norman, Inc., Birmingham.

New directors, also elected at this meeting, are:

Alexander Murdock, Southern Wheel Div., American Brake Shoe Co. and Foundry Co., Birmingham.

H. A. Nelson, Hill & Griffith Co., Birmingham.

W. Carson Adams, W. Carson Adams, Coal & Coke, Birmingham.

*Chairman*—R. Bernard, La Cie J. A. Gosselin, Ltd., Drummondville, Que.

*Vice-Chairman*—G. Ewing Tait, Dominion Engineering Works, Ltd., Lachine, Que.

*Secretary-Treasurer*—R. E. Cameron, Webster & Sons, Ltd., Montreal.

*Directors for three-year term*: Henry Louette, Warden King, Ltd., Montreal.

Alex. C. Neal, Enamel & Heating Products, Ltd., Amherst, N. S.

Alex. Pirrie, Electric Steels, Ltd., Three Rivers, Que.

G. D. Turnbull, Canadian Car & Foundry Co., Ltd., New Glasgow, N. S.

*Director for one-year term*: L. Saindon, Quebec Brass & Iron Foundry, Ltd., Levis, Que.

The concluding event was a talk, "Pouring Castings Through Risers," by A. E. Cartwright and C. C. Brisbois, both of Robt. Mitchell Co., Ltd., Montreal. Using lantern slides for illustration purposes, the speakers collaborated in presenting an outstanding technical discussion.

## E. Canada Observes Second Anniversary

By R. E. Cameron

ESTERN Canada and Newfoundland observed the chapter's second anniversary at the Mt. Royal Hotel, Montreal, April 21, with a dinner meeting which was attended by 250 members and guests.

Chapter Chairman E. N. Delahunt, Warden King, Ltd., Montreal, officiated and introduced among others Joseph Sully, Sully Brass Foundry, Ltd., Toronto, a National Director, who extended greetings from the Ontario Chapter which he represented. N. F. Hindle, Assistant A.F.A. Secretary, the delegate from national headquarters, complimented the officers and directors of the group for their excellent organization work and the fine showing the chapter has made since it was organized. The official enrollment in two years has reached 270.

Following a number of committee reports was the announcement of new officers and directors for the ensuing season:

## Double Feature Program At Northern California

By Geo. L. Kennard

MEMBERS of the Northern California Chapter held the closing meeting of the season at the Engineers Club, San Francisco, May 12, when a double feature program drew an attendance of 147 members and guests, representing 57 firms. H. A. Bossi, H. C. Macaulay Foundry Co., Berkeley, Chapter President, presided.

David B. Reeder, Electro Metallurgical Sales Corp., introduced the first speaker, Nathan Janco, Centrifugal Casting Machine Co., Tulsa, Okla. Mr. Janco's presentation on centrifugal casting machines and their application was of such interest that

## New Officers Take Over At Toledo Chapter

By R. B. Bunting

FOLLOWING the established custom of the Toledo Chapter, new officers are installed following election and their duties begin immediately. As a result of recent voting, therefore, present activities are now under the direction of:

*Chairman*—Leighton Long, Leighton M. Long & Associates, Toledo.

*Vice-Chairman*—W. P. Mack, Bruce Foundry Co., Tecumseh, Mich.

*Secretary-Treasurer*—B. L. Pickett, Unitcast Corp., Toledo.

The newly elected directors are:

V. E. Zang, Unitcast Corp., Toledo.

R. T. Jansen, Unitcast Corp., Toledo.

R. B. Bunting, Bunting Brass & Bronze Co., Toledo.

## Lee Wilson Attends Birmingham Meeting

By H. B. McLaurine

LEE C. Wilson, Reading Steel Castings Div., American Chain & Cable Co., Inc., Reading, Pa., National President, attended the final meeting of the Birmingham District Chapter, held at the Tutwiler Hotel, May 19, and addressed the group in behalf of the national body. Another guest was W. R. Battle, athletic director of the Birmingham-Southern College.

the number of questions only could be covered generally, reserving for appointment a more detailed explanation to those industrially concerned.

Mr. Reeder next introduced the speaker for the second part of the program, Harold E. Henderson, chairman of the Foundry Sands and Mold Materials Committee, who presented each member of his committee and gave a short synopsis of what the group had accomplished.

## St. Louis Discusses Postwar Problems

By J. H. Williamson

**F**OUNDRY and Equipment Manufacturers Postwar Problems and Answers" was the subject under discussion at the May 11 meeting held by the St. Louis District Chapter at the DeSoto Hotel, St. Louis. A. J. Tuscany, Foundry Equipment Manufacturers Association, Inc., Cleveland, in presenting the talk, offered several suggestions so that foundries might maintain their position with competitive industries in the postwar period.

With L. A. Kleber, General Steel Casting Corp., St. Louis, presiding, the annual election of officers and directors was held at this meeting. Those elected to serve for the 1944-45 term are:

**Chairman**—E. Eugene Ballard, National Bearing Metals Co., St. Louis.

**Vice-Chairman**—W. E. Illig, Banner Iron Works, St. Louis.

**Secretary-Treasurer**—Chas. E. Rothweiler, Hickman, Williams & Co., St. Louis.

**Directors for a three-year term:** L. A. Kleber.

Fred B. Riggan, Key Co., East St. Louis, Ill.

C. H. J. Walcher, American Steel Foundries, Granite City, Ill.

J. H. Williamson, M. A. Bell Co., St. Louis.

**Directors for a one-year term:**

L. J. Desparois, Pickands, Mather & Co., St. Louis.

C. B. Shanley, Semi-Steel Castings Co., St. Louis.

## Welding and Salvaging Discussed at Detroit

By H. H. Wilder

**W**ELDING and salvaging of gray iron and malleable castings was the subject of one of four round table discussions at the final meeting of the season for the Detroit



(Photo courtesy Art Allen, Penton Publishing Co.)

Officers of the Saginaw Valley section of the Detroit Chapter, elected for 1944-45 season: (left to right) Vice-Chairman E. T. White, Bostick Foundry Co., Lapeer; Chairman Charles Morrison, Saginaw Malleable Iron Div., General Motors Corp.; Secretary-Treasurer H. G. McMurry, Buick Motor Div., General Motors Corp., Detroit.

Chapter, on May 18. Leader of the discussion was L. A. Danse, General Motors Corp., Detroit, with F. J. Walls, International Nickel Co., Detroit, National Vice-President, serving as the group chairman.

The round table group on magnesium heard L. Brown, Magnesium Fabricators Div., Bohn Aluminum & Brass Corp., Adrian, Mich., speak on the effects of superheating magnesium. A. W. Stolzenburg, Aluminum Co. of America, Detroit, was the chairman for this session.

At the steel meeting, H. L. Larson, National Carbon Co., discussed the use of graphite rods in risers of steel castings, and C. E. Silver, Michigan Steel Castings Co., Detroit, acted as group chairman.

T. F. W. Meyer, Federal Mogul Corp., Detroit, spoke on foundry control methods in the production of high-strength brasses at the brass session, with G. J. LeBrasse, Federal Mogul Corp., serving as the group chairman.

The annual elections were also held at this meeting, with the following taking office:

**Chairman**—R. G. McElwee, Vanadium Corp. of America, Detroit.

**Vice-Chairman**—E. C. Hoenicke, Foundry Div., Eaton Mfg. Co., Detroit.

**Treasurer**—W. W. Bowring, Frederic B. Stevens, Inc., Detroit.

**Secretary**—A. H. Allen, Penton Publishing Co., Detroit.

**Directors**:

John E. Linabury, General Motors Corp., Detroit.

Gordon C. Creusere, Semet-Solvay Co., Detroit.

M. E. Brooks, Dow Chemical Co., Bay City, Mich.

O. L. Allen, Pontiac Motor Div., General Motors Corp., Pontiac, Mich.

## Reports on Chapter Activities

Officers and representatives of A.F.A. chapter and other foundry groups who report on local activities in this issue, are identified below:

**Birmingham**—H. B. McLaurine, Birmingham, Ala.; Chapter Reporter.

**Canton District**—Geo. M. Biggert, United Engineering & Foundry Co., Alliance, Ohio; Chapter Secretary.

**Central New York**—E. G. White, Crouse-Hinds Co., Syracuse; Chapter Secretary.

**Chesapeake**—Geo. F. Kuhn, Gibson & Kirk Co., Baltimore, Md.; Chapter Reporter.

**Cincinnati**—Martin F. Milligan, The Lunkenheimer Co., Cincinnati, Ohio; Chapter Secretary.

**Detroit**—H. H. Wilder, Vanadium Corp. of America, Detroit; Chapter Reporter.

**Eastern Canada and Newfoundland**—Robt. E. Cameron, Webster & Sons, Ltd., Montreal; Chapter Secretary-Treasurer.

**Northern California**—G. L. Kennard, Northern California Foundrymen's Institute, San Francisco; Chapter Secretary-Treasurer.

**Northeastern Ohio**—Jas. G. Goldie, Cleveland Trade School, Cleveland; Chapter President.

**Ontario**—G. L. White, Westman Publications, Ltd., Toronto; Chapter Secretary.

**Quad City**—H. L. Creps, Frank Foundries Corp., Moline, Ill.; Chapter Secretary-Treasurer.

**Rochester**—D. E. Webster, American Laundry Machinery Co., Rochester; Chapter Secretary-Treasurer.

**Saginaw Valley**—H. H. Wilder, Vanadium Corp. of America, Detroit; Group Reporter.

**St. Louis**—J. H. Williamson, M. A. Bell Co., St. Louis; Chapter Secretary-Treasurer.

**Texas**—H. L. Wren, Beaumont Cement Sales Co., Beaumont, Texas; Chapter Secretary-Treasurer.

**Toledo**—R. B. Bunting, Bunting Brass & Bronze Co., Toledo; Chapter Secretary-Treasurer.

**Twin City**—Alexis Caswell, Manufacturers Assn. of Minneapolis, Inc., Minneapolis; Chapter Secretary-Treasurer.

**Western New York**—J. Ralph Turner, Queen City Sand & Supply Co., Buffalo; Chapter Secretary.

## N. E. O. Elects 1944-45 Officers and Directors

By J. G. Goldie

AS a result of the recent annual election, the destinies of the Northeastern Ohio Chapter will be guided next season by R. F. Lincoln, Russell F. Lincoln Co., Lakewood, Ohio, President. Other officers and directors are:

**Vice-President** — Wm. Goebert, Bowler Foundry Co., Cleveland.

**Secretary** — Gilbert Nock, Nock Fire Brick Co., Cleveland.

**Treasurer** — F. Ray Fleig, Smith Facing & Supply Co., Cleveland.

**Directors — Term expires 1945:**

Frank Dost, Sterling Foundry Co., Wellington, Ohio.

Ed Follman, Griffin Wheel Co., Cleveland.

Jas. G. Goldie, Cleveland Trade School, Cleveland.

Thomas Johnston, Republic Steel Corp., Cleveland.

Ed McDonald, Berten Foundry Co., Columbiania.

J. J. Witenhafer, Lake City Malleable Co., Cleveland.

**Directors — Term expires 1946:**

J. B. Heisler, A. C. Williams Co., Ravenna, Ohio.

H. C. Gollmar, Elyria Foundry Co., Elyria, Ohio.

Bruce Aiken, Crucible Steel Casting Co., Cleveland.

Henry Trenkamp, Ohio Foundry Co., Cleveland.

H. F. Roberts, Williams & Co., Cleveland.

**Directors — Term expires 1947:**

Frank Wiseman, Ferro Machine & Foundry Co., Cleveland.

Elmer Zirzow, National Malleable & Steel Casting Co., Cleveland.

C. V. Carson, Case School of Applied Science, Cleveland.

Joseph E. Dvorak, Eberhard Mfg. Co., Cleveland.

Bert S. Parker, Jr., Youngstown Foundry & Machine Co., Youngstown.

## First All-Day Meeting Is Sponsored by Texas

By H. L. Wren

MEMBERS of the Texas Chapter had a busy day, May 18, at the Golfcrest Country Club, Houston. A hotly contested golf competition, with prizes awarded through the courtesy of the Beaumont Cement Sales Co., got under way early in the day. Two strokes each separated the winning scores.

## Calling All Speakers for Chapter Meetings!

REQUESTS are being received at National Headquarters for a list of available speakers to address chapter meetings during the coming season.

Will those members who are qualified as speakers and willing to serve A.F.A. by addressing the different chapter meetings drop me a note at National Headquarters, 222 West Adams Street, Chicago?

Thanks for your cooperation.

R. E. KENNEDY,  
Secretary, A.F.A.

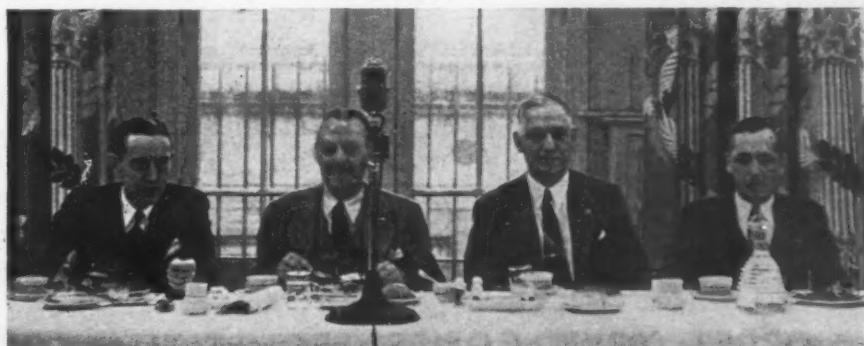
Phil Hawkins, Texas Steel Co., Fort Worth, was first with a total of 68 strokes; W. J. Sutton, Wilson Foundry & Machine Co., Houston, took second place with a net of 70; and the score of 72 resulted in a tie for third prize between George Bryant, Oil City Brass Works, Houston, and William Ferguson, Texas Electric Steel Casting Corp., Houston.

A regular social hour was next, followed by a group dinner which was presided over by Chapter Chairman F. M. Wittlinger, Texas Electric Steel Casting Corp., Houston. Except for the election of officers, the meeting was a strictly social occasion.

## Annual Get-Together Party at Chesapeake

By George Kuhn

THE Chesapeake Chapter held its Annual Get-Together Party at the Belvedere Hotel on May 27. These annual events are designed to allow the members to "let down their hair" and become brothers, and the 200 members and guests attending certainly lived up to tradition.



Section of speakers table at April 13 meeting of St. Louis District Chapter: N. J. Dunbeck, Chairman L. A. Kleber, Vice-Chairman E. E. Ballard and Secretary-Treasurer J. H. Williamson.

Activities were begun by E. W. Horlebein, Gibson & Kirk Co., Baltimore, when he introduced the officers, directors and guests, after which he turned the meeting over to Chapter Chairman R. T. Covington, American Hammered Piston Ring Div., Koppers Co., Baltimore.

Elections for the coming year placed in office:

**Chairman** — H. A. Horner, Frick Co., Baltimore.

**Vice-Chairman** — H. F. Taylor, Naval Research Laboratories, Anacostia, Washington, D. C.

**Secretary-Treasurer** — L. H. Denton, Baltimore Association of Commerce, Baltimore.

Directors include:

Jack Mentzer, Taggart & Co., Philadelphia.

W. H. Holtz, American Brake Shoe Co., Baltimore.

R. T. Covington, American Hammered Piston Ring Div., Koppers Co., Baltimore.

## C. E. Bales Is Speaker At Rochester Meeting

By Donald Webster

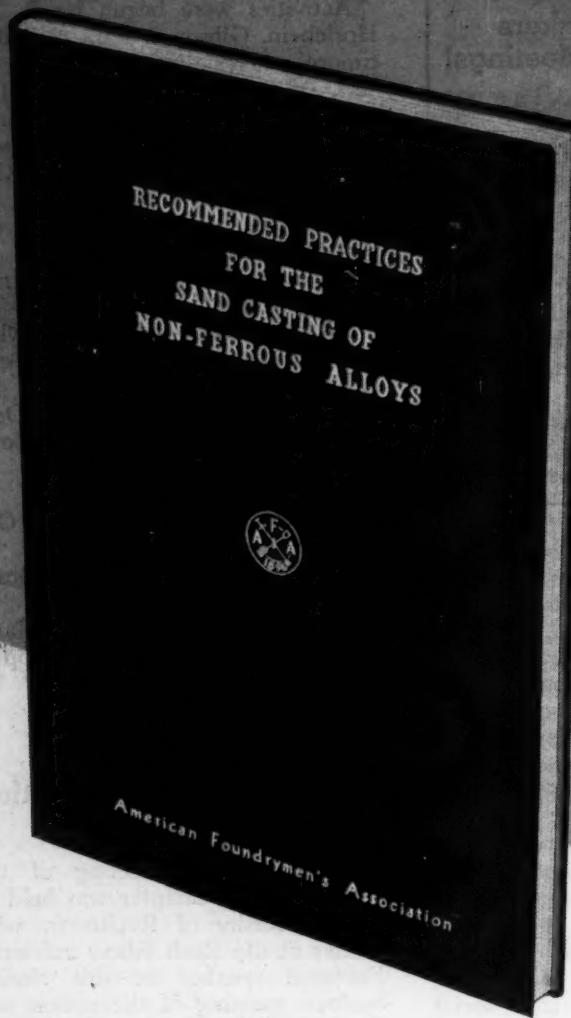
THE June 7 meeting of the Rochester Chapter was held at the University of Rochester, with dinner at the Rush Rhees cafeteria. Featured speaker at this closing business meeting of the season was Cecil E. Bales, Ironton Fire Brick Co., Ironton, Ohio.

Mr. Bales presented an interesting discussion on new developments in foundry refractories, based on an intensive program of research and study of available raw materials, methods of manufacture, and applications in melting units.

He stressed the need for proper choice of refractory materials, care in installation, the value of thorough and complete drying and, finally, some recommendations to increase the life of refractory materials.

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Leaded High-Strength Yellow Brass  
(Manganese Bronze).  
Tin Bronze and Leaded Tin Bronze.  
High-Lead Tin Bronze.  
Leaded Nickel Brass and Bronze  
Alloys (Silicon Bronze).  
Aluminum Bronze.  
Aluminum-Base Alloys.  
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